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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/509,493	05/15/2000	NAOKI OKINO	Q58562	2695

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SUGHRUE MION ZINN  
MACPEAK & SEAS  
2100 PENNSYLVANIA AVENUE NW  
WASHINGTON, DC 20037

EXAMINER

KILKENNY, TODD J

ART UNIT	PAPER NUMBER
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1733

16

DATE MAILED: 11/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/509,493

Applicant(s)

OKINO ET AL.

Examiner

Todd J. Kilkeny

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 September 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 11 March 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 10 – 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (EP 0748683) in view of Ichikawa (JP 59-85729) or Biffar (DE 3843342) and further in view of Todaka et al (US 5,807,588).

Takahashi et al. disclose a method for preparing a panel with a resinous frame wherein a shaped resin product is extruded through a shaping die (14) in a predetermined shape, pulled into a pressing member (20) and pressed so as to be unified to a panel (22), thereby obtaining a panel with a resinous frame (Figure 1, abstract). Takahashi et al. appear only to disclose extruding the resin using an extruder (12) failing to further define the type or components of the extruder (12).

Ichikawa teaches a plunger preplasticizing injection-molding machine, wherein a resin plasticizing process is disclosed. Referring to Figures 1 and 2, Ichikawa teaches an injection machine (unlabeled) upstream a die having a nozzle end (5). Resinous material is fed to the injection machine via a hopper wherein an extruding screw carries the molten resin to a spaces C and D of a plunger barrel (1). Plunger (13) injects the resin material toward the die (5) wherein it is extruded (See English Abstract).

Biffar teaches a device for discharging resin plastic using an extruder or plasticator (2) ("injection machine) upstream a mouthpiece (25) ("die"), wherein the mouthpiece (25) includes a nozzle like tip (26). Thermoplastic is fed to the extruder via

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hopper (41) where it is transferred to a plunger chamber (16) by what appears to be a screw. The resin is injected to the mouthpiece (25) and out of nozzle end (26) by two plungers (4 & 5).

**It would have been obvious to one of ordinary skill in the art at the time of the invention to employ an extruder having a metering screw and plunger for the extruder means disclosed by Takahashi et al. since extruding apparatuses comprising a metering screw and plunger are known as evidenced by Ichikawa and Biffar, wherein it would be readily apparent to one of ordinary skill in the art that the metering device of Ichikawa or Biffar would provide more accurate metering of plastic resin as compared to conventional screw extruders as evidenced by Biffar positively suggesting that such a metering device allows the use of different rates of motion or changes in the cross section of the mouthpiece to discharge defined accumulations of material.**

As to claims 12 and 13, Biffar teaches an adjusting device (33) that acts to open or close the mouthpiece (25). Biffar's adjusting device is recognized as applicant's claimed flow controller as it acts to control the injection amount of resin through the nozzle end (26).

As to claims 14, 15, 18 and 19, Todaka et al. teach a controllable extrusion molding apparatus comprising an extruding molding machine wherein the amount of resin injected from the extruder is controlled in response to a relative moving speed of the panel (14). Specifically, Todaka et al. teach decreasing the peripheral speed of the panel (14) when changing from the rectilinear portion of the panel (i.e. the edge) to the

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corner portions, and at the same time, controlling the working speed of the extrusion molding machine actuator so that “the discharged amount of an extrusion material is relatively changed to follow up changes in the peripheral speed” of the panel (Column 2, lines 6 – 14; Column 6, line 60 - Column 7, line 52). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to control the injection amount of the resin material in the extrusion apparatus of Takahashi et al. in response to a relative moving speed of the panel as is known as taught by Todaka et al. as means to reduce cycle time in the continuous production of resin framed panels by allowing the robot operating the movement of the panel to be operated with speed capability so as to more efficiently match the resin extruded with the speed of the panel movement (e.g. moving the panel to apply resin around its corners).

As to claims 16, 17, 20 and 21, Todaka et al. teaches controlling an extrusion molding machine actuator to control the injection amount of resinous material in response to the relative moving speed of the panel. Only in an exemplary fashion do Todaka et al. teach that the extruder is a screw extruder and therein to control the injection amount of the resin, Todaka et al, disclose controlling the motor of the screw extruder. It is the examiner’s position that one of ordinary skill in the art would readily recognize that Todaka et al.’s more general teachings to control the injection amount of resin in response to the relative moving speed of the panel provides obvious motivation for controlling the injection amount in such a process no matter what extrusion apparatus is employed. Therefore, as it is known that the injected amount of resin from an extruder is dependent on the pressure of extruding an extrusion material supplied by

a molding machine actuator (Todaka et al., Column 2, lines 15 – 18), it would have been obvious to one of ordinary skill in the art at the time of the invention to control the moving speed of the plunger in a combination plunger and screw extrusion apparatus, wherein one skilled in the art would readily recognize that the plunger is in control of the pressure of the discharging resin material. As discussed above, one of ordinary skill in the art would have been motivated to employ the plunger and screw extruding extrusion apparatus in the process of Takahashi et al. in view of Ishikawa or Biffar.

As to claims 22 and 23, Takahashi et al. disclose extruding and pressing said resinous frame onto a panel.

### ***Response to Arguments***

3. Applicant's arguments filed 9-5-02 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the advantages of the metering devices of the secondary references to Ichikawa and Biffar as stated for motivation in the previous office action (so as to "enable the back pressure of the

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metering screw to be more freely adjustable” as compared to conventional screw extruders as disclosed by Ichikawa or as disclosed by Biffar to “provide extrusion means that provide a simple way to discharge plastic without major temperature loss”) are examples of a general advantage that metering devices comprising screw extruders in combination with plungers provide more accurate metering of plastic resins as compared to conventional screw extruders. It is the examiner’s position that this more general advantage would be knowledge generally apparent to one of ordinary skill in the art and would have provided ample motivation to apply such a metering device to the teaching of Takahashi. Biffar suggesting that his metering device provides the possibility to use different rates of motion or changes in the cross section of the mouthpiece to discharge defined accumulations of material is evidence of this general advantage.

Furthermore, as to applicant’s argument that Ichikawa teaches extruding into a mold is not persuasive as it is the examiner’s position that this teaching would not render unobvious to one of ordinary skill the advantages that the metering device could provide in extruding resin to additional tools.

### ***Conclusion***

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

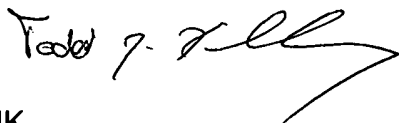
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

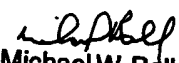
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Todd J. Kilkenny** whose telephone number is **(703) 305-6386**. The examiner can normally be reached on Mon - Fri (9 - 5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



TJK  
November 15, 2002



Michael W. Ball  
Supervisory Patent Examiner  
Technology Center 1700